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PATENT APPLICATION

THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the Application of

Attn: OIPE

Akira SAKURAI et al.

Application No.: 10/533,546

Docket No.: 123653

Filed: May 2, 2005

For: A METHOD FOR FORMING A THIN FILM OF SILVER MIRROR AND A
METHOD FOR FORMING A COATED FILM CONTAINING SAID THIN FILM OF
SILVER MIRROR

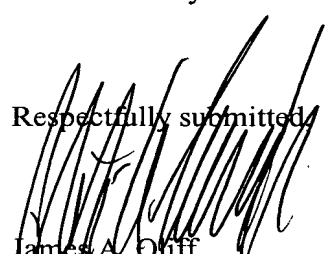
REQUEST FOR CORRECTION OF PALM RECORDS

Commissioner for Patents
P.O. Box 1450
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Sir:

Attached is a photocopy of the original filing receipt on which errors have been corrected in red. These errors are being brought to the attention of the Patent and Trademark Office so that it may correct its records. A copy of the Preliminary Amendment filed on May 2, 2005 is also enclosed.

Respectfully submitted,


James A. Oliff
Registration No. 27,075

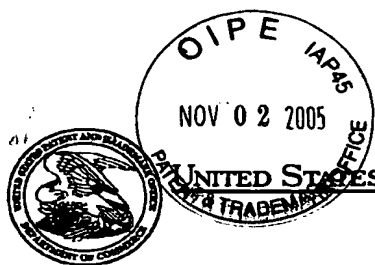
Philip A. Caramanica, Jr.
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JAO:PAC/cqc

Date: November 2, 2005

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APPL NO.	FILING OR 371 (c) DATE	ART UNIT	FIL FEE REC'D	ATTY. DOCKET NO	DRAWINGS	TOT CLMS	IND CLMS
10/533,546	05/02/2005	1762	900	123653	4	18	2

CONFIRMATION NO. 9357

25944
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FILING RECEIPT



OC000000017261106

OCT 27 2005

Date Mailed: 10/24/2005

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Applicant(s)

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Assignment For Published Patent Application

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Power of Attorney: The patent practitioners associated with Customer Number 25944.

Domestic Priority data as claimed by applicant

This application is a 371 of PCT/JP03/13837 10/29/2003

Foreign Applications

JAPAN 2002-319580 11/01/2002

Projected Publication Date: 01/26/2006

Non-Publication Request: No

Early Publication Request: No

Title

Next Page →

Method for forming a thin film silver mirror and method for forming coated film ^{containing said} comprising thin
 of silver mirror film of a a thin

Preliminary Class

427

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PATENT APPLICATION

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the Application of

Akira SAKURAI et al.

Application No.: New U.S. National Stage of
PCT/JP03/013837

Filed: May 2, 2005

Docket No.: 123653

For: A METHOD FOR FORMING A THIN FILM OF SILVER MIRROR AND A METHOD
FOR FORMING A COATED FILM CONTAINING SAID THIN FILM OF SILVER
MIRROR

PRELIMINARY AMENDMENT

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

Please consider the following:

Amendments to the Specification;

Amendments to the Claims as reflected in the listing of claims; and

Remarks.

Amendments to the Specification

Please replace the title as follows:

~~METHOD FOR FORMING THIN SILVER MIRROR FILM, AND METHOD FOR FORMING COATING FILM COMPRISING THIN SILVER MIRROR FILM~~ A METHOD FOR FORMING A THIN FILM OF SILVER MIRROR AND A METHOD FOR FORMING A COATED FILM CONTAINING SAID THIN FILM OF SILVER MIRROR

Please replace the Abstract with the attached amended/substitute Abstract.

Amendments to the Claims:

The following listing of claims will replace all prior versions, and listings, of claims in the application:

Claims 1-10 (cancelled)

11. (New) A silver mirror-thin film forming method, comprising preparing a silver mirror reaction-treating solution comprising three solutions: an ammoniacal silver salt aqueous solution, an aqueous solution of caustic soda and an aqueous solution of a reducing agent, mixing said aqueous solution of caustic soda and said aqueous solution of the reducing agent to obtain a mixed liquid, independently and simultaneously spraying the mixed liquid and said ammoniacal silver salt aqueous solution onto an object to be coated, or mixing said mixed liquid with said ammoniacal silver salt aqueous solution to obtain a mixed liquid and applying the mixed liquid onto the object, and thereby forming a silver mirror-thin film by depositing silver through a silver mirror reaction to provide the silver mirror-thin film on a surface of the object.

12. (New) The silver mirror-thin film forming method set forth in claim 11, wherein said ammoniacal silver salt aqueous solution is an ammoniacal silver nitrate aqueous solution.

13. (New) The silver mirror-thin film forming method set forth in claim 11, wherein said ammoniacal silver salt aqueous solution is an ammoniacal silver carbonate aqueous solution.

14. (New) The silver mirror-thin film forming method set forth in claim 11, wherein said ammoniacal silver salt aqueous solution contains silver in a range of 0.5 to 2.0 % by mass, and said caustic soda aqueous solution contains sodium in a range of 0.5 to 2.0 % by mass.

15. (New) A coated film-forming method comprising the steps of forming a silver mirror-thin film on a surface of an object to be coated, by said silver mirror-thin film forming

method set forth in claim 11, and applying a coated film of a light-transmitting resin onto the silver mirror-thin film.

16. (New) A coated film-forming method, comprising the steps of applying a layer of a primer resin on a surface of an object to be coated, forming a thin film of silver mirror on a surface of the primer resin layer by said silver mirror-thin film forming method set forth in claim 11, and forming a coated film of a light-transmitting resin on the silver mirror-thin film.

17. (New) The coated film-forming method set forth in claim 16, wherein a coating material for forming the primer resin layer contains a substantially identical resin component as that of a coating material for forming the light-transmitting resin coated film.

18. (New) The coated film-forming method set forth in claim 16, which comprises a step of activating the primer resin layer before the formation of the silver mirror coated film.

19. (New) The coated film-forming method set forth in claim 15, wherein said object to be coated has light transmissibility.

20. (New) A coated film comprising a thin film of silver mirror on a surface of an object to be coated, said silver mirror-thin film containing substantially no sodium, and a coated film of a light-transmitting resin provided on an upper surface of the silver mirror-thin film.

21. (New) The silver mirror-thin film forming method set forth in claim 12, wherein said ammoniacal silver salt aqueous solution contains silver in a range of 0.5 to 2.0 % by mass, and said caustic soda aqueous solution contains sodium in a range of 0.5 to 2.0 % by mass.

22. (New) The silver mirror-thin film forming method set forth in claim 13, wherein said ammoniacal silver salt aqueous solution contains silver in a range of 0.5 to 2.0 % by mass, and said caustic soda aqueous solution contains sodium in a range of 0.5 to 2.0 % by mass.

23. (New) A coated film-forming method comprising the steps of forming a silver mirror-thin film on a surface of an object to be coated, by said silver mirror-thin film forming method set forth in claim 12, and applying a coated film of a light-transmitting resin onto the silver mirror-thin film.

24. (New) A coated film-forming method comprising the steps of forming a silver mirror-thin film on a surface of an object to be coated, by said silver mirror-thin film forming method set forth in claim 13, and applying a coated film of a light-transmitting resin onto the silver mirror-thin film.

25. (New) A coated film-forming method comprising the steps of forming a silver mirror-thin film on a surface of an object to be coated, by said silver mirror-thin film forming method set forth in claim 14, and applying a coated film of a light-transmitting resin onto the silver mirror-thin film.

26. (New) The coated film-forming method set forth in claim 16, wherein said object to be coated has light transmissibility.

27. (New) The coated film-forming method set forth in claim 17, wherein said object to be coated has light transmissibility.

28. (New) The coated film-forming method set forth in claim 18, wherein said object to be coated has light transmissibility.

REMARKS

Claims 11-28 are pending in this application. By this Amendment, the specification and abstract are amended, claims 1-10 are cancelled and claims 11-28 are new.

Should the Examiner believe that anything further would be desirable in order to place this application in even better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number set forth below.

Respectfully submitted,

COPY

James A. Oliff
Registration No. 27,075

Thomas J. Pardini
Registration No. 30,411

JAO:TJP/cqc

Attachment: Abstract

Date: May 2, 2005

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ABSTRACT OF THE DISCLOSURE

In forming a thin film of silver mirror on a surface of an object to be coated, a silver mirror reaction-treating solution including three solutions: an ammoniacal silver salt aqueous solution ~~(I)~~, an aqueous solution of caustic soda ~~(IIa)~~ and an aqueous solution of a carbohydrate-based reducing agent ~~(IIb)~~ such as glucose (fructose) are used. Immediately after the caustic soda aqueous solution ~~(IIa)~~ and the reducing agent aqueous solution ~~(IIb)~~ are mixed, the resulting mixed liquid and the ammoniacal silver salt aqueous solution ~~(I)~~ are independently and simultaneously sprayed onto the object. Alternatively, the mixed liquid ~~(II)~~ and the ammoniacal silver salt aqueous solution ~~(I)~~ are mixed together immediately upstream of a spraying nozzle, and the mixed liquid ~~(III)~~ is sprayed onto the object. Thereby, a thin film of silver mirror is formed in a thickness of around 0.01 to 0.03 μm , for example, through depositing silver by a silver mirror reaction.